

**Draft Agenda for the EUSO General Meeting
19-23 May 2003, NSSTC, Huntsville, AL**

The main purpose of this meeting is to:

- 1) Verify the present status of conceptual design of EUSO and
- 2) Work on a draft of the “Report of the EUSO Instrument Phase A Study” to be provided to ESA for the Phase A Final Review.

For the Phase A Final Review we also must update the document package prepared for the ESA Midterm Review (held in ESTEC on March 20th). The updates will be discussed at the meeting.

Monday, 19 May 2003

8:30AM – 10:30 **Tour of MSFC**

The bus for MSFC will leave the Holiday Inn at Madison Square at 8:30 AM and return at 10:30 AM.

1:00 – 3:00 PM: **“ESAF”: A real "tutorial" session for all people interested, and particularly focussed on the optics simulation lead by Marco Pallavicini**

The bus for NSSTC will leave the Holiday Inn at Madison Square at 12:45 PM and return about 6:15 PM at the end of the meeting.

1st Plenary session

The bus for NSSTC will leave the Holiday Inn at Madison Square at 3:00 PM and return about 6:15 PM at the end of the meeting.

Introduction (3:15-3:45 PM)

- | | |
|------------------------------------|---|
| • Introduction | <i>Jim Adams, 3 min</i> |
| • Welcome | <i>Ann Whitaker, 5 min</i>
<i>Director, MSFC Science Directorate</i> |
| • Logistics | <i>Jim Adams</i> |
| • Purpose and Focus of the Meeting | <i>EUSO PI, 15min</i> |

Session #1: Status of the EUSO Program (4:45-6:00 PM, including Coffee Break (15 min))

Session Chairman: Jim Adams

- | | |
|--|----------------------|
| • Status of the EUSO Mission at Consortium level | <i>PI+IM, 30 min</i> |
| • Break | <i>15 min</i> |
| • Report from the National Representatives | |

(These are intended to be brief reports of the status of EUSO in each country. Please mention your accomplishments since the last meeting, any concerns about EUSO and the status of support for your participation in EUSO)

- | | |
|---------------|----------------------------------|
| o France | <i>Patrick Nedelec, 5 min</i> |
| o Germany | <i>Masahiro Teshima, 5 min</i> |
| o Italy | <i>Marco Pallavincini, 5 min</i> |
| o Japan | <i>Toshi Ebisuzaki, 5 min</i> |
| o Portugal | <i>Mario Pimenta, 5 min</i> |
| o Switzerland | <i>TBD, 5 min</i> |
| o USA | <i>Jim Adams, 5 min</i> |

End of the Session

6:00 PM

The bus will return to the hotel at Madison Square Mall.

Tuesday, 20 May 2003-(1st Plenary session continued)

The bus for NSSTC will leave the Holiday Inn at Madison Square at 8:30 AM and return about 6:15 PM at the end of the meeting.

Session #2: The “Report on the EUSO Instrument Phase A Study” (9:00-10:05 AM)

Session Chairman: Jim Adams

- | | |
|--|----------------------------|
| • ESA Science Directorate View of EUSO | <i>Jean Clavel, 20 min</i> |
| • Presentation of the Table of Contents, Sections. | <i>PI/IM Team, 30 min</i> |
| • Coffee Break | <i>15 min</i> |

Session #3:Scientific Objectives (10 :05-12:00 AM)

Session Chairman : Andrea Santangelo

- | | |
|--|----------------------------------|
| • The EUSO Science Case: presentation of the EUSO Science Report by the SOWG | |
| o Report from the Chairman of SOWG | <i>Masahiro Teshima, 15 min</i> |
| o EUSO Science – Cosmic Rays | <i>Masahiro Teshima, 15 min</i> |
| o EUSO Science – Neutrino Physics | <i>Tom Weiler, 15 min</i> |
| o Discussion | <i>15 min</i> |
| • EUSO vs. other observatories (mainly Auger) | |
| o Comparisons with other observatories | <i>Masahiro Teshima, 10 min</i> |
| o Comparisons with other observatories | <i>Andrea Santangelo, 10 min</i> |
| o Comparisons with other observatories | <i>Osvaldo Calalano, 10 min</i> |
| o Discussion | <i>15 min</i> |

Lunch

Session #4: Requirements (1:00-3:00 PM)

Session Chairman: Jim Adams

- | | |
|---------------------------------------|----------------------------------|
| • Scientific Requirements | <i>Andrea Santangelo, 10 min</i> |
| • Mission and Instrument Requirements | <i>Osvaldo Catalano, 10 min</i> |

- Discussion 100 min

Session #5: Model Instrument (3:00-6:00 PM, 15 min Coffee break included)

Session Chairman: Alessandro Petrolini

- The EUSO Instrument Design and Status (I)
 - o Subsystem Status Reports 63 min

These are intended to be brief status reports on the subsystems. Please briefly mention accomplishments since the Palermo meeting and any issues and concerns.

- Structure and Thermal System *Alessandro De Masi, 9 min*
 - Optics and Filters *Roy Young, 9 min*
 - Focal Surface *Hiro Shimizu, 9 min*
 - Analog FEE *Dy-Holm Koang, 9 min*
 - Digital FEE *Marco Pallavincini, 9 min*
 - Trigger Electronics and Onboard Readout *Osvaldo Catalano, 9 min*
 - Atmospheric Sounding *Osvaldo Catalano, 9 min*
- Break 15 min
 - o Specific Issues 100 min
 - System *Alessandro DeMasi, 20 min*
 - Optics
 - ❑ Optics design *Ken Pitalo, 15 min*
 - ❑ Optics Throughput and Spot Size *Roy Young, 15 min*
 - ❑ Requirements for Optical Baffle Design *Jim Adams, 5 min*
 - ❑ Definition of baseline lens material *Jim Derrickson, 5 min*
 - ❑ Optics simulation for ESAF *Yoshi Takahashi, 10 min*
 - ❑ Optical Filter Choices *Emanuele Pace, 10 min*
 - ❑ Optical Filter Design *Mark Christl, 10 min*
 - ❑ Discussion 30 min

Close of day 1, the bus will take you back to the hotel at Madison Square Mall.

Wednesday, 21 May 2003 – (9:00 AM, 1st Plenary session continued)

The bus will leave the hotel at Madison Square for NSSTC at 8:30 AM. At the end of the session there will be a big bus directly to the U.S. Space and Rocket Center for the Dinner and a small (15 passenger van) that will return to the hotel and after 15 minutes at the hotel, continue to the U.S. Space and Rocket Center. In the morning you should try to bring what you will need at the Dinner, but if you want to go back by the hotel, there is the possibility for it.

Session Chairman: Osvaldo Catalano

- Status of the EUSO Mission at ESA level *Giacinto Gianfiglio, 20 min*

Session #5 (cnt'd): Model Instrument (9:20 AM-12:00 PM, 15 min Coffee break included)

Session Chairman: Jim Adams

- The EUSO Instrument Design and Status (II):
 - o Focal Surface and Photon Detector
 - Definition of baseline photon detector *Hiro Shimizu, 10 min*
 - Systematic uncertainties in photon detector efficiency *Hiro Shimizu, 10 min*
 - Possible development of alternate photon sensors *Hiro Shimizu, 10 min*
 - o System Electronics
 - Analog FEE *Dy Holm Koang, 5 min*
 - Digital FEE *Marco Pallavicini, 5 min*
 - Trigger and Onboard Readout *Osvaldo Catalano, 5 min*
 - Control System *P. Tua, 10 min*
 - o The Atmosphere Sounding Device
 - LIDAR *Osvaldo Catalano, 10 min*
- Break *15 min*

Session Chairman: Osvaldo Catalano

- o Calibration and Alignment *Emanuele Pace, 10 min*
- o Power Supply *Alessandro Petrolini, 10 min*
- Supporting Activities
 - o Fluorescence Yield *Dider Lebrun, 10 min*
 - o Background *Osvaldo Catalano, 10 min*
 - o Cherenkov albedo *P. Galeotti, 10 min*
- Discussion *30 min*

Lunch

Session #5 (continued): Model Instrument (1:00-5:30 PM, 15 min Coffee break included)

Session Chairman: Eric Plagnol

- **End-To-End Simulation and Performance**
 - o Simulation: from the physics process to the detector simulation
 - Introduction *Giacomo D'Ali Staiti, 5 min*
 - UNISIM and its improvements *Giacomo D'Ali Staiti, 15 min*
 - Fluorescence: status of knowledge and implementation *Dider Lebrun, 15 min*
 - The atmospheric transport equation *Eric Plagnol, 15 min*
 - REMAR 3F Simulation *Giacomo D'Ali Staiti, 15 min*
 - o ESAF software code
 - Status and plan *Marco Pallavicini, 20 min*
 - Optics simulator *John Watts, 15 min*
- Break *15 min*

Session Chairman: Giacomo D'Ali Staiti

- o Data Analysis: **2:15**
 - Introduction *M.C. Maccarone, 5 min*
 - Angular and Energy Resolution vs. pixel size *Y. Kawasaki, 15 min*
 - Angular resolution vs. energy and zenith angle *M.C. Maccarone, 10 min*
 - Event reconstruction: direction and energy *M.C. Maccarone, 15 min*
- o Expected Results:
 - Duty Cycle, Experimental Resolution, Acceptance, etc. *E. Plagnol, 30 min*
 - Trigger efficiency in Florence and Paris *J. Dolbeau, 15 min*
- o The role of the Atmosphere:

- Deconvolution of atmosphere effect
- o Atmospheric Phenomena other than EAS
 - Meteors and meteoroids
 - Elves, Lightning and ...
- o Moon effects
- o Discussions

E. Plagnol/D. Lebrun - 15 min

M.C. Maccarone, 10 min

Dider Lebrun, 10 min

A. Zuccaro, 10 min

20 min

Close of day 2

5:30 PM

At the end of the day there will be two vehicles waiting. A large bus from the U.S. Space and Rocket Center. It will go directly to the U.S. Space and Rocket Center for the dinner. There will also be a 15 passenger van that will return to the hotel at Madison Square for 15 minutes before proceeding to the U.S. Space and Rocket Center. After the dinner, the bus will take you back to Madison Square and the van will return to NSSTC.

Dinner banquet

6:00 PM

Thursday, 22 May 2003 – (1st Plenary session continued)

The bus for NSSTC will leave the Holiday Inn at Madison Square at 8:30 AM and return about 6:15 PM.

Session #6: Operations, EPO and Management (9:00-11:00 PM, 15 min Coffee break included)

- The Science Operation and Data Center
- The Education and Public Outreach Program
- Management
- Discussions

Catarina Espirito Santo, 30 min

Cettina Marrarone, 30 min

Andrea Santangelo, 30 min

20 min

Definition of the splinter's contents

Jim Adams, 10 min

Lunch

Splinter sessions

Notes:

- 1) Rooms 2096,3084,3098 and 4078 are available for impromptu meetings
- 2) The agendas for these splinter meetings will be arranged by the leaders, see them to get on the agenda.

12:00 –2:00
Review of the IRD*
Mechanical Design
ESAF Tutorial

Room
3084
3098
4078

Leader
Giacinto Gianfiglio
Tia Ferguson
Marco Pallavincini

2:00-4:00

Room

Leader

End-to-End Simulation	4078	Giacomo D'Ali Staiti
ICD Meeting	2096	Roy Young

4:00-6:00	Room	Leader
Optics Design	2096	Yoshi Takahashi
o New Optical Design Concept		Steve Csorna
Sci. Req. Flowdown	4096	Jim Adams

Close of day 3	6:00 PM
----------------	---------

Close of day 1, the bus will take you back to the hotel at Madison Square Mall unless you are on the Steering Committee.

Evening Pizza Dinner for Steering Committee (6:30 – 9:30 PM)

The Steering Committee will order dinner to be delivered from either a local pizzeria or a local sandwich shop. After the meeting they will be taken back to the hotels in the van.

2nd Plenary session

Friday, 23 May 2003 – 2nd Plenary Session (9:00 AM to Noon)

The bus for NSSTC will leave the Holiday Inn at Madison Square at 8:30 AM and return about 12:15 PM at the end of the meeting. It will remain at the hotel for 15 minutes and then depart for Jack Daniels Distillery. The 15 passenger van will be available to take people to the hotel or directly to the airport after the meeting ends at noon.

- Reports by the splinter sessions
- Distribution of actions and definitions of schedule

Conclusions

Noon: end of the meeting

The bus for NSSTC will leave NSSTC for the Holiday Inn at Madison Square when the meeting ends at noon.. It will remain at the hotel for 15 minutes and then depart for Jack Daniels Distillery. The 15 passenger van will be available to take people to the hotel or directly to the airport after the meeting ends at noon.

Afternoon: excursion (Jack Daniels Distillery), dinner.

This will go on all afternoon and into the evening with a tour of the Distillery, some shopping time in the local town, a whiskey tasting and dinner with a band.